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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,068	06/30/2003	Keisuke Chino	ION-0215	7830
23353	7590	11/18/2004	EXAMINER	
RADER FISHMAN & GRAUER PLLC			LEE, RIP A	
LION BUILDING			ART UNIT	
1233 20TH STREET N.W., SUITE 501			PAPER NUMBER	
WASHINGTON, DC 20036			1713	

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/608,068	Applicant(s) CHINO ET AL.	
	Examiner Rip A. Lee	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09222003</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-20 are rejected under 35 U.S.C. 102(a) as being anticipated by U.S. 2002/0022700 to Chino *et al.*

Chino *et al.* teaches thermoplastic polymers comprising a carbonyl containing group and a nitrogen containing heterocycle in the side chain (claims 1, 2, 18). Representative structures of the side chain are shown in claims 10 and 11 and in the examples (page 15), and these correspond directly to those shown in the present claims. The examples reveal polymers containing pendant imidazole, triazole, thiadiazole, pyridine, and thiazole heterocyclic groups (examples 1-9). These thermoplastics are used in compositions comprising a compound containing a group I metal such as NaX, KX, and LiX, where X is halogen, carboxylate, or hydroxyl (claims 21-23). According to the inventors, the compositions are further comprised of reinforcing filler such as carbon black or silica in an amount of 10-70 and 20-80 parts by weight, respectively (paragraphs [0149] and [0151]). As such, all aspects of the present claims are anticipated by the prior art of Chino *et al.*

2. The prior art made of record but not relied upon is considered pertinent to the Applicant's disclosure.

Example 20 of U.S. 2003/0078347 to Brown *et al.* discloses a composition comprising BPA polycarbonate endcapped with 2-(2-carbomethoxyphenoxy)-4,6-bis(2,6-dimethylphenoxy)-1,3,5-triazine and sodium hydroxide catalyst. The resulting thermoplastic composition contains a polymer having a carbonyl containing group and a nitrogen containing heterocycle, but these groups lie at the polymer terminus rather than in a side chain.

U.S. Patent No. 6,512,051 to Chino *et al.* discloses polymers identical to those of the present invention, and compositions are comprised of quaternary ammonium salts, rather than group I metal containing compounds. Based on the disclosure, it would not have been obvious to modify the composition to arrive at the subject matter of the present claims.

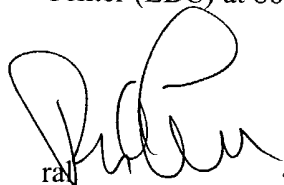
U.S. Patent No. 6,809,157 to Chino *et al.* discloses polymers identical to those of the present invention, and compositions are comprised of transition metal salts rather than group I metal containing compounds. Based on the disclosure, it would not have been obvious to modify the composition to arrive at the subject matter of the present claims.

U.S. Patent No. 6,372,880 to Shinoda *et al.* discloses a polymer designated by structural formula (12) comprising a side chain containing a carbonyl group and a nitrogen containing heterocycle. The polymer, however, is not thermoplastic, and the composition does not contain group I metal containing compounds.

JP 8-239583 to Moriguchi *et al.* teaches thermoplastic polymers similar to those of the present invention in that they contain the requisite side group having carbonyl and heterocyclic nitrogen moieties. The inventive compositions are comprised of transition metal salts rather than group I metal containing compounds. Based on the disclosure, it would not have been obvious to modify the composition to arrive at the subject matter of the present claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).



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November 4, 2004